

HYDROCHLORIC ACID - Muriatic

4500
in Iron

LCP CHEMICALS
A DIVISION OF HANLIN GROUP, INC.
RARITAN PLAZA II, RARITAN CENTER
EDISON, N.J. 08837

DATE: 9/89
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MATERIAL SAFETY DATA
FOR
HYDROCHLORIC ACID
18, 20, 22, 23 DEG. BAUME'

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* SECTION I	MATERIAL IDENTIFICATION *
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CHEMICAL NAME: HYDROCHLORIC ACID	C.A.S. NO.: 7647-01-0
SYNONYMS: MURIATIC ACID, HYDROGEN CHLORIDE	R.Q.: 5000 LBS.
D.O.T. IDENTIFICATION NO.: UN 1789	(100% BASIS)
TRADE NAME: HYDROCHLORIC ACID	CHEMICAL FORMULA: HCL
D.O.T. SHIPPING NAME: HYDROCHLORIC ACID SOLUTION	
CHEMICAL FAMILY: ACID	N.F.P.A. REGISTRY: 3-0-0
LABELING: CORROSIVE	PLACARD: UN 1789

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* SECTION II (SEE SECTION XI)	INGREDIENTS AND HAZARDS *
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PRINCIPAL COMPONENT: HCL C.A.S. NO.: 7647-01-0	PERCENT: 28-31-35-37
BALANCE IS WATER	
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS OR GASES: TOXIC FUMES	
CAN BE GENERATED BY CONTACT WITH ALKALIS, OXIDANTS AND MANY	
METALS WHICH CAUSE SPONTANEOUS TEMPERATURE RISE.	
ADDITIONAL INFORMATION: TLV 5 PPM CEILING ACGIH;	
PEL 5 PPM CEILING OSHA	

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* SECTION III	PHYSICAL DATA *			
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BAUME:	18	20	22	23
BOILING POINT DEG. F:	195	182	144	123
SPECIFIC GRAVITY:	1.142	1.160	1.179	1.189
VAPOR DENSITY 20C:	1.3	1.3	1.3	1.3
PERCENT VOLATILE BY VOLUME:	100	100	100	100
WEIGHT PERCENT HCL:	27.9	31.4	35.2	37.2
FREEZE/SOLIDIFICATION TEMP:	-49	-63.4	-86.3	-101.2
SOLUBILITY IN WATER:	INFINITE	INFINITE	INFINITE	INFINITE
APPEARANCE/ODOR:	COLORLESS TO LIGHT YELLOW FUMING LIQUID.			
PUNGENT AND SUFFOCATING ODOR.				
MOLECULAR WEIGHT:	36.47	PH: 0 OR LESS THAN 0.1		

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* SECTION IV	FIRE AND EXPLOSION DATA *
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FLASH POINT (METHOD): NONE NON-COMBUSTIBLE	
FLAMMABLE LIMITS: NONE	
EXTINGUISHING MEDIA: SUITABLE FOR SURROUNDING FIRE.	
SPECIAL FIRE FIGHTING PROCEDURES: USE PROTECTIVE CLOTHING SUITABLE	
FOR ACIDS AND SELF CONTAINED BREATHING APPARATUS.	
UNUSUAL FIRE/EXPLOSION HAZARDS: FLAMMABLE HYDROGEN GAS IS GENERATED	
BY REACTION WITH MANY METALS.	
ADDITIONAL INFORMATION: THIS MATERIAL CAN BE NEUTRALIZED WITH AN	
ALKALI SUCH AS WEAK CAUSTIC SOLUTIONS OR SODA ASH.	

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* SECTION V	HEALTH HAZARD DATA *
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NIOSH THRESHOLD LIMIT VALUE: NONE NIOSH (DHEW 78-210 SEPT.1985)
OSHA PERMISSIBLE EXPOSURE LIMIT: 5 PPM CEILING (MARCH 1989)
ACGIH LIMIT VALUE: 5 PPM CEILING (1988-89 EDITION)
NTP CARCINOGEN: NONE- WORLD HEALTH ORGANIZATION
IARC CARCINOGEN: NONE- WORLD HEALTH ORGANIZATION
MUTAGENIC: NONE- WORLD HEALTH ORGANIZATION
TERATOGENIC: NONE- WORLD HEALTH ORGANIZATION
REPRODUCTIVE TOXICITY: NONE- WORLD HEALTH ORGANIZATION
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: RESPIRATORY AILMENTS
PRIMARY ROUTES OF EXPOSURE: INHALATION, BODY CONTACT
EFFECTS OF EXPOSURE:
 INHALATION: PUNGENT, SORE THROAT, COUGHING, SHORTNESS OF
 BREATH. CONCENTRATIONS ABOVE 50 PPM WILL DAMAGE THE UPPER
 RESPIRATORY TRACT.
 SKIN: CORROSIVE, REDNESS, BURNS
 EYES: CORROSIVE, BURNS, PAIN, BLURRED VISION
 INGESTION: CORROSIVE TO ESOPHAGUS AND STOMACH. MAY LEAD TO
 CONVULSIONS
EMERGENCY FIRST AID:
 INHALATION: REMOVE TO FRESH AIR, KEEP UPRIGHT POSITION,
 PROVIDE OXYGEN, GET MEDICAL AID.
 SKIN: WASH WITH WATER, GET MEDICAL HELP.
 EYES: FLUSH WITH WATER FOR 15 MINUTES, INCLUDING UNDER THE
 EYELIDS. GET MEDICAL HELP.
 INGESTION: DO NOT INDUCE VOMITING-GET MEDICAL AID-RINSE
 MOUTH WITH WATER-DRINK PLENTY OF WATER-GIVE MILK OF
 MAGNESIA OR LIME WATER.
ADDITIONAL INFORMATION: CONCENTRATIONS ABOVE 1300 PPM ARE BELIEVED
 TO BE IMMEDIATELY DANGEROUS TO LIFE.
TARGET ORGANS: RESPIRATORY SYSTEM, SKIN, EYES.

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* SECTION VI	REACTIVITY DATA *
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STABILITY: STABLE UNDER NORMAL CONDITIONS.
CONDITIONS TO AVOID: HEAT SOURCES, CONTACT WITH METALS OR ALKALIS,
 AND BODY CONTACT.
INCOMPATABILITY: BASE METALS, METAL OXIDES, ALKALINE MATERIALS,
 CARBONATES, AMINES, HYDROXIDES.
HAZARDOUS DECOMPOSITION PRODUCTS: HYDROGEN CHLORIDE GAS, HYDROGEN
POLYMERIZATION: WILL NOT OCCUR
ADDITIONAL INFORMATION: STRONG MINERAL ACID - CORROSIVE TO MOST
 COMMON METALS.

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* SECTION VII	ENVIRONMENTAL PROTECTION PROCEDURES *
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SPILL RESPONSE: CONTAIN SPILL OR LEAKS IN PLASTIC CONTAINERS,
 DIKES, PONDS, OR RETENTION AREAS WHERE SPILLAGE CAN BE
 NEUTRALIZED WITH SODA ASH OR ALKALINE SOLUTIONS. CONSIDERE
 RECOVERY IF PROPER EQUIPMENT IS AVAILABLE.
WASTE DISPOSAL METHODS: DISPOSAL IS CONTINGENT UPON ALLOWABLE SALT
 CONCENTRATIONS AND PH IN THE EFFLUENT STREAM.
ADDITIONAL INFORMATION: FOLLOW FEDERAL, STATE, LOCAL AND PERMITP
 REGULATIONS. PREPARE FOR EMERGENCIES IN ADVANCE, SUCH AS
 ACID RESISTANT FLOORS AND DRAINAGE, NEUTRALIZATION MATERIALS,
 CONTAINMENT SAND, ETC.

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* SECTION VIII SPECIAL PROTECTION INFORMATION *

EYE PROTECTION: SPLASH GOGGLES OR FACE SHIELD
RESPIRATORY PROTECTION: NIOSH APPROVED ACID GAS CHEMICAL CARTRIDGE
RESPIRATOR OR FULL FACE WITH CANISTER. FOR UNKNOWN
CONCENTRATIONS USE APPROVED SELF CONTAINED BREATHING APPARATUS.
OTHER PROTECTION: DISPOSABLE PLASTIC SUITS, OR A RUBBER APRON.
VENTILATION RECOMMENDED: SUFFICIENT TO CONTROL BELOW TLV
REQUIREMENTS. DUE TO LOW FREEZE POINTS THIS MATERIAL IS
NORMALLY STORED OUTSIDE OF BUILDINGS.
GLOVE TYPE RECOMMENDED: RUBBER, LATEX, PLASTIC
ADDITIONAL INFORMATION: AVOID BODY CONTACT AND INHALATION OF FUMES

* SECTION IX SPECIAL PRECAUTIONS *

HYGIENIC PRACTICES IN HANDLING/STORING: WEAR EYE, RESPIRATORY AND
CLOTHING TO PROTECT AGAINST ACCIDENTAL SPILLS.

PRECAUTIONS TO BE TAKEN FOR HANDLING/STORING:

1. STORE IN COMPATIBLE EQUIPMENT (ACID PROOF)
2. PROVIDE VENTILATION
3. STORE AWAY FROM ALKALINE MATERIALS, OXIDIZING AGENTS AND
BASE METALS.
4. DIKE STORAGE AREAS TO MEET FEDERAL, STATE, AND LOCAL
REGULATIONS.

PRECAUTIONS FOR REPAIR MAINTENANCE OF CONTAMINATED EQUIPMENT:

THOROUGHLY WASH WITH WATER AND CHECK THAT RESIDUAL IS SAFE.

OTHER PRECAUTIONS: KEEP METALS AWAY FROM STORAGE AREAS AS CONTACT
MAY CAUSE HYDROGEN GENERATION.

ADDITIONAL INFORMATION: ONLY TRAINED PERSONNEL SHOULD HANDLE THIS
MATERIAL AND SOMEONE SHOULD BE IN ATTENDANCE THROUGHOUT ANY
LOADING, UNLOADING, OR TRANSFER OPERATION.

* SECTION X TRANSPORTATION *

USUAL SHIPPING CONTAINERS: RUBBER LINED TANK CARS, TRUCKS, PLASTIC
DRUMS AND GLASS CARBOYS.

USUAL SHELF LIFE: UNLIMITED STORAGE/TRANSPORT TEMPS: AMBIENT

SUITABLE STORAGE MATERIALS/COATINGS: NON-METALLIC, MATERIAL
APPROVED RESISTANT TO STRONG MINERAL ACIDS.

UNSUITABLE: MOST COMMON METALS, CONCRETE

OTHER INFORMATION: PROVIDE VENTILATION. STORE AWAY FROM ALKALINE
MATERIALS, OXIDIZING AGENTS, AND BASE METALS. DIKE STORAGE
AREAS TO MEET FEDERAL, STATE, AND LOCAL REGULATIONS. KEEP
METALS AWAY FROM STORAGE AREAS WHICH MAY CAUSE HYDROGEN GENER-
ATION. ONLY TRAINED PERSONNEL SHOULD HANDLE THIS MATERIAL
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SECTION XI

REGULATORY INFORMATION *

TOXIC SUBSTANCES CONTROL ACT - THIS SUBSTANCE IS LISTED ON THE TOXIC SUBSTANCES CONTROL ACT CHEMICAL SUBSTANCE INVENTORY 1985 EDITION VOLUME I.

EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW, PER 40 CFR 355, APPENDIX A, THRESHOLD PLANNING QUANTITY 500 POUNDS - GAS ONLY SUPPLIER NOTIFICATION REQUIREMENTS, PER 40 CFR 372.45

THIS PRODUCT OR MIXTURE CONTAINS A TOXIC CHEMICAL OR CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 - SEE SECTION II.

COMPREHENSIVE RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA) THIS PRODUCT IS SUBJECT TO CERCLA REPORTING REQUIREMENTS.

REVISED: 9/89

SUPERCEDES: 11/86; 11/87; 9/88

LCP MSDS. NO.007647010

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